



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

|   |               |                      |                     |                  |
|---|---------------|----------------------|---------------------|------------------|
| APPLICATION NO.   | FILING DATE   | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/563,973  | 01/06/2006    | Kenji Obora          | Q91892              | 7322             |
| 23373   | 7590          | 12/17/2007           | EXAMINER            |                  |
| SUGHRUE MION, PLLC<br>2100 PENNSYLVANIA AVENUE, N.W.<br>SUITE 800<br>WASHINGTON, DC 20037 |               |                      | HUTCHINSON, SHAWN R |                  |
| ART UNIT  | PAPER NUMBER  |                      |                     |                  |
|   |               | 4174                 |                     |                  |
| MAIL DATE   | DELIVERY MODE |                      |                     |                  |
| 12/17/2007  | PAPER         |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |  |                                     |
|------------------------------|--|-------------------------------------|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/563,973   | <b>Applicant(s)</b><br>OBORA ET AL. |
|                              | <b>Examiner</b><br>SHAWN R. HUTCHINSON | <b>Art Unit</b><br>4174             |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 20 November 2007.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-6 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-6 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____          |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application<br>Paper No(s)/Mail Date _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____   |

#### **DETAILED ACTION**

1. Claims 1-6 remain pending in this application.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the U.S.

3. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yasui, et al {Yasui} (JP 03-137239 A).

4. Yasui teaches:

a. Fabric- is made by fluid jet textured yarns of core and sheath with loops and sagging. The rupture elongation of the fabric is no less than 100%, (Claim 1). A yarn formation example includes a first twist and a second twist, (Page 12, Paragraph 3). Another yarn formation example results in a primary yield point of  $0.72\text{-g}\cdot\text{den}^{-1}$ , (Page 13, Paragraph 3). With a 260-denier, the strength of this yarn is 187.2-g·f. The conversion of 187.2-g·f to N·f is 1.8-N·f, less than the 2.0 N maximum specified for the yield strength.

b. Yarns- polyamide and polyester yarns for tire reinforcing fabrics, (Page 3, Paragraph 6).

c. Applications- fabrics are used to reinforce tires, (Page 3, Paragraph 3).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yasui, et al. {Yasui} (JP 03-137239 A) in view of Glass, et al. {Glass} (US 3677318 A).

Yasui teaches polyester and polyamide fiber-forming polymers for tire reinforcement fabrics, but lack poly(vinyl alcohol).

Glass teaches a list of acceptable materials for analogous fabric including polyester, polyamide, and poly(vinyl alcohol), (Column 2, Lines 19-20).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include poly(vinyl alcohol) {Glass} as suitable materials for the specific tire cord reinforcement fabric {Yasui}. "Reading a list and selecting a known compound to meet known requirements is no more ingenious than selecting the last piece to put in

the last opening in a jig-saw puzzle," see *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). The motivation would have been for the mechanical properties and performance when woven and molded, ({Glass} Column 2, Lines 16-33). Therefore, it would have been obvious to combine Yasui with Glass and obtain the invention as specified.

#### ***Response to Arguments***

9. Applicant's arguments filed 20 November 2007 have been fully considered but they are not persuasive.

Applicant argues on Pages 2 & 3 that Yasui only teaches that the load of the primary yield point should be as high as possible *because* the primary load is dependent upon the frictional force between single fibers when the sheath yarn is shrunk. Applicant asserts the primary yield point is an "*alternative characteristic*" of the shrinkage of the sheath yarn, and that the inter-fiber force drives the value of the primary yield point for controlling the performance and handling of the fabric.

Rather than an alternative characteristic, Yasui claims a *complementary property* of the core yarn by reporting the pull strength ( $0.57\text{-g}\cdot\text{den}^{-1}$ ) at the primary yield point ( $18.2\text{-g}\cdot\text{den}^{-1}$ ) ({Yasui} Claim 2). Yasui teaches the associated appropriate values of the pull strength on Pages 6-7, but merely states it as another important parameter to produce an engineered tire fabric. As discussed above, while Yasui claims the primary yield-point strength relative to the denier of the yarn, having a yarn that is less  $2.0\text{ N}\cdot\text{f}$  is taught by example, clearly an inherent feature, and thus anticipated; see *In re Best*,

562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977). Applicant alleges that Yasui teaches a load that should be “as high as possible,” which finds neither explicit nor implicit support in the translation, which simply discusses the relationship between the load at primary yield point and the liner density of the yarn ({Yasui} Page 6 Paragraph 2). Even if this argument were grounded it would otherwise be inconsequential based on the disclosed examples that demonstrate inherency.

The purpose of the instant invention is alleged to be different than that by Yasui with respect to the uniformity of the tire, which is clearly mistaken because directly after disclosing achieved primary yield point and pull resistance (during shrinkage) Yasui discusses conditions of the workability (handle) and uniformity of the tire ({Yasui} Page 6 Paragraphs 1-3 | Page 13 Paragraph 1).

Further, Applicant argues that the load of primary yield is somehow independent of the fineness of the *sheath* yarn, but Yasui teaches that the fineness of the *core* yarns positively impacts the load at primary yielding point ({Yasui} Page 6 Paragraph 2). In the instant application, that the primary yield point is given in “absolute” strength has no substantive bearing on the claimed inventions because the instant invention necessarily requires multiple filaments to achieve the handle, workability, and diameter in the yarn and fabric to be used as tire reinforcement. While Yasui claims the strength at primary yield differently, the embodiments are patentably indistinct as presented and claimed.

Applicant alleges that the manufacturing process is different and yields patentably distinct properties, even though the claims as presented contain no such subject matter or amendments. The section that applicant appears to base his

Art Unit: 4174

argument of a different process appears to be ({Yasui} Page 8 Paragraphs 1-2), stating that after the combination of core and sheath yarns, a “dry-heat treatment” is applied to improve the handling properties of the yarn. Semantically, a “dry-heat” treatment can be interpreted differently than being “dried,” which can imply a heat-until-dry treatment. Yasui merely teaches a heating treatment that can be construed as dry heat rather than moist heat. Regardless, both inventions are treated with heat ostensibly to cure the rubber matrices ({Yasui} Page 12 Paragraph 4 | {Applicant} [0026]). Further, both inventions are woven after constructing the core/sheath yarns and dried after applying the rubber ({Yasui} Embodiment 1 | {Applicant} Example 1). Applicant alleges that the yield point of the weft yarn increases upon drying, which may or may not be true for either Yasui or Applicant. Without unexpected comparative results, this allegation is unsubstantiated, and because both the process and products appear substantially identical this argument is unpersuasive. Contrary to arguments, the processes and products appear to be substantially identical and unpatentable as claimed; see *In re Schreiber*, 128 F.3d 1473, 1478, 44 USPQ2d 1429, 1432 (Fed.Cir.1997).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication from the Examiner should be directed to SHAWN R. HUTCHINSON whose telephone number is (571)270-1546. The Examiner can normally be reached on 7 AM to 5 PM, M-H.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, D. Lawrence Tarazano can be reached on (571) 271-1515. The fax phone number for the organization where this application is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call (800) 786-9199 (IN USA OR CANADA) or (571) 272-1000.

/Shawn R. Hutchinson/

Application/Control Number: 10/563,973  
Art Unit: 4174

Page 8

Examiner, Art Unit 4174